Textbook Alignment to the Utah Core – Algebra 1

This alignment has been completed using an "Independent Alignment Vendor" from the USOE approved list (www.schools.utah.gov/curr/imc/indvendor.html.) ***Yes*** ✓ ***No*** _____

Name of Company and Individual Conducting Alignment: Standard Media Services, LLC: David A. Johnson

A "Credential Sheet" has been completed on the above company/evaluator and is (Please check one of the following):

✓ **On record with the USOE.**

☐ **The "Credential Sheet" is attached to this alignment.**

Instructional Materials Evaluation Criteria (name and grade of the core document used to align): Algebra 1 Core Curriculum

Title: Algebra I **ISBN#:** 66865-5-4.IN

Publisher: Kinetic Books

Overall percentage of coverage in the *Student Edition (SE) and Teacher Edition (TE)* of the Utah State Core Curriculum: 100 **%**

Overall percentage of coverage in *ancillary materials* of the Utah Core Curriculum: 0 **%**

STANDARD I: Students will expand number sense to understand, perform operations, and solve problems with real numbers.

Percentage of coverage in the *student and teacher edition* for Standard I: 100 **%**	**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard I:** 0 **%**		
	Coverage in *Student Edition(SE) and*	**Coverage in *Ancillary***	***Not covered***

OBJECTIVES & INDICATORS		*Teacher Edition (TE)* (pg #'s, etc.)	*Material* (titles, pg #'s, etc.)	*in TE, SE or ancillaries* ✓
Objective 1.1: Represent real numbers as points on the number line and distinguish rational numbers from irrational numbers.				
a.	Define a rational number as a point on the number line that can be expressed as the ratio of two integers, and points that cannot be so expressed as irrational.	**Chapter 2: Unit 1:** 2.01, 2.03, 2.04 **Chapter 12: Unit 1:** 12.01, 12.05		
b.	Classify numbers as rational or irrational, knowing that rational numbers can be expressed as terminating or repeating decimals and irrational numbers can be expressed as non-terminating, non-repeating decimals.	**Chapter 2: Unit 1:** 2.03		
d.	Classify *pi* and square roots of non-perfect square numbers as irrational.	**Chapter 2: Unit 1:** 2.01, 2.03, 2.04 **Chapter 12: Unit 1:** 12.01, 12.02, 12.03, 12.05		
d.	Place rational and irrational numbers on a number line between two integers.	**Chapter 2: Unit 1:** 2.04		
Objective 1.2: Compute fluently and make reasonable estimates with rational and irrational numbers.				
a.	Simplify, add, subtract, multiply, and divide expressions with square roots.	**Chapter 12: Unit 1:** 12.01, 12.02, 12.03, 12.04, 12.07, 12.08 **Chapter 12: Unit 2:** 12.09, 12.10, 12.11, 12.12, 12.13, 12.14, 12.15, 12.16 **Chapter 12: Unit 3:** 12.17, 12.18, 12.19, 12.20, 12.21, 12.22, 12.23, 12.24 **Chapter 12: Unit 4:** 12.25, 12.26, 12.27, 12.28, 12.29, 12.30, 12.31, 12.32 **Chapter 12: Unit 6:** 12.37, 12.38, 12.39, 12.40, 12.41, 12.42, 12.43, 12.44		
b.	Evaluate and simplify numerical expressions containing rational numbers and square roots using the order of	**Chapter 12: Unit 1:** 12.01, 12.02, 12.03, 12.04, 12.07, 12.08		

	operations.	**Chapter 12: Unit 2:** 12.09, 12.10, 12.11, 12.12, 12.14, 12.15, 12.16 **Chapter 12: Unit 3:** 12.17, 12.18, 12.19, 12.20, 12.21, 12.22, 12.23, 12.24 **Chapter 12: Unit 4:** 12.25, 12.26, 12.28, 12.29, 12.30, 12.31, 12.32 **Chapter 12: Unit 5:** 12.33, 12.34, 12.35, 12.36 **Chapter 12: Unit 10:** 12.65, 12.66 **Chapter 13: Unit 1:** 13.10 **Chapter 13: Unit 4:** 13.31, 13.32		
c.	Compute solutions to problems, represent answers in exact form, and determine the reasonableness of answers.	NOTE: Throughout the program students compute solutions to problems, represent answers in exact form, and check to determine reasonableness of solutions. See sample lessons below: **Chapter 3: Unit 1:** 3.01 **Chapter 3: Unit 6:** 3.34, 3.35 **Chapter 8: Unit 1:** 8.07 **Chapter 11: Unit 7:** 11.40 **Chapter 12: Unit 8:** 12.47 **Chapter 13: Unit 1:** 13.06		
d.	Calculate the measures of the sides of a right triangle using the Pythagorean Theorem.	**Chapter 12: Unit 6:** 12.38, 12.39, 12.40, 12.41, 12.42, 12.43, 12.44 **Chapter 12: Unit 11:** 12.69, 12.70 **Chapter 12: Unit 12:** 12.71 **Chapter 13: Unit 1:** 13.08		
STANDARD II: Students will extend concepts of proportion to represent and analyze linear relations.				
Percentage of coverage in the *student and teacher edition* for Standard II: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard II: 0 %**		

OBJECTIVES & INDICATORS		Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)	Coverage in *Ancillary Material* (titles, pg #'s, etc.)	*Not covered in TE, SE or ancillaries* ✓
Objective 2.1: Represent and analyze the slope of a line.				
a.	Identify the slope of a line when given points, a graph, or an equation.	**Chapter 5: Unit 4:** 5.23, 5.24, 5.25, 5.26 **Chapter 5: Unit 5:** 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.37, 5.39, 5.40		
b.	Identify horizontal and vertical lines given the equations or slopes.	**Chapter 5: Unit 5:** 5.31, 5.37, 5.39		
c.	Determine the effect of changes in slope or *y*-intercept t in $y = mx + b$.	**Chapter 5: Unit 5:** 5.27, 5.28, 5.29		
d.	Determine and explain the meaning of slopes and intercepts using real-world examples.	**Chapter 5: Unit 4:** 5.26 **Chapter 5: Unit 5:** 5.32, 5.35, 5.36, 5.38, 5.40		
Objective 2.2Model and interpret problems having a constant rate of change using linear functions.				
a.	Write algebraic expressions or equations to generalize visual patterns, numerical patterns, relations, data sets, or scatter plots.	**Chapter 5: Unit 5:** 5.31, 5.32, 5.33, 5.34, 5.35, 5.36, 5.37, 5.39, 5.40 **Chapter 5: Unit 6:** 5.42, 5.43, 5.44, 5.45, 5.46, 5.47, 5.48 **Chapter 5: Unit 8:** 5.50, 5.51, 5.52, 5.53, 5.54, 5.55, 5.56, 5.57 **Chapter 5: Unit 9:** 5.58, 5.59, 5.60, 5.61, 5.64		
b.	Represent linear equations in slope-intercept form, $y = mx + b$, and standard form, $Ax + By = C$.	**Chapter 5: Unit 5:** 5.27, 5.28, 5.29, 5.30, 5.31, 5.32 , 5.33, 5.34, 5.36, 5.37, 5.39, 5.40 **Chapter 5: Unit 6:** 5.41 **Chapter 6: Unit 1:** 6.08		
c.	Distinguish between linear and non-linear functions by examining a table, equation, or graph.	**Chapter 6: Unit 1:** 6.00, 6.01, 6.02, 6.03, 6.04, 6.05, 6.06, 6.07, 6.08, 6.09, 6.11, 6.13, 6.14		
d.	Interpret the slope of a linear function as a rate of change in real-world situations.	**Chapter 5: Unit 8:** 5.50, 5.51, 5.52, 5.53, 5.54, 5.55, 5.56, 5.57		

Objective 2.3: Represent and analyze linear relationships using algebraic equations, expressions, and graphs.				
a.	Write the equation of a line when given two points or the slope and a point on the line.	**Chapter 5: Unit 5:** 5.33, 5.34, 5.35, 5.36, 5.39, 5.40		
b.	Approximate the equation of a line given the graph of a line.	**Chapter 5: Unit 5:** 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 **Chapter 5: Unit 6:** 5.41, 5.42, 5.43, 5.44, 5.45, 5.46, 5.47, 5.48 **Chapter 5: Unit 9:** 5.62, 5.63, 5.64		
c.	Identify the *x*- and *y*-intercepts from an equation or graph of a line or a table of values.	**Chapter 5: Unit 5:**.29, 5.29, 5.30 **Chapter 5: Unit 6:** 5.41 **Chapter 5: Unit 10:** 10.79 **Chapter 5: Unit 13:** 13.48		
d.	Graph linear relations and inequalities by plotting points, by finding *x*- and *y* intercepts, or by using the slope and any point on the line.	**Chapter 5: Unit 5:** 5.33, 5.34, 5.35 **Chapter 5: Unit 8:** 8.27, 8.28, 8.29, 8.30, 8.31, 8.32, 8.33, 8.34, 8.35		
STANDARD III: Students will develop fluency with the language and operations of algebra to analyze and represent relationships.				
Percentage of coverage in the *student and teacher edition* for Standard III: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard III: 0 %**		
OBJECTIVES & INDICATORS		**Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)**	**Coverage in *Ancillary Material* (titles, pg #'s, etc.)**	***Not covered in TE, SE or ancillaries*** ✓
Objective 3.1: Simplify polynomials and the quotient of monomials.				
a.	Simplify and evaluate monomial expressions and las.	**Chapter 1: Unit 2:** 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.20, 1.21, 1.22 **Chapter 1: Unit 5:** 1.30, 1.31, 1.32, 1.33, 1.34, 1.35, 1.36, 1.37 **Chapter 2: Unit 4:** 2.31, 2.32, 2.33, 2.34, 2.35, 2.36, 2.37 **Chapter 9: Unit 1:** 9.01, 9.02,		

		9.03, 9.04, 9.05, 9.06, 9.07, 9.08, 9.09, 9.10, 9.11 **Chapter 9: Unit 2:** 9.12, 9.13, 9.14, 9.15, 9.16, 9.17, 9.18, 9.19, 9.20, 9.21, 9.22, 9.23 **Chapter 9: Unit 3:** 9.24, 9.25, 9.26, 9.27, 9.28, 9.29, 9.30, 9.31, 9.32		
b.	Add and subtract polynomials.	**Chapter 10: Unit 2:** 10.14, 10.15, 10.16, 10.17, 10.18, 10.19		
c.	Multiply monomials by a polynomial.	**Chapter 10: Unit 3:** 10.20, 10.21, 10.22, 10.23, 10.24, 10.25, 10.26, 10.27, 10.28, 10.29		
d.	Multiply binomials.	**Chapter 10: Unit 3:** 10.21, 10.22, 10.23, 10.24, 10.25, 10.26, 10.27, 10.28, 10.29 **Chapter 10: Unit 4:** 10.29, 10.30, 10.31, 10.32, 10.33, 10.34		
e.	Simplify the quotient of monomials using positive exponents.	**Chapter 10: Unit 5:** 10.35, 10.36, 10.37, 10.38, 10.39, 10.40, 10.41, 10.42		
Objective 3.2: Solve and interpret linear equations and inequalities in various situations including real-world problems.				
a.	Solve single-variable linear equations and inequalities algebraically and graphically.	**Chapter 3: Unit 8:** 3.45, 3.46, 3.47, 3.48, 3.49, 3.50 **Chapter 3: Unit 10:** 3.56, 3.57, 3.58, 3.59 **Chapter 5: Unit 5:** 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 **Chapter 8: Unit 1:** 8.01, 8.01, 8.02, 8.03, 8.04, 8.05, 8.06, 8.07, 8.08, 8.09, 8.10, 8.11, 8.12 s		
b.	Solve real-world problems involving constant rates of	**Chapter 5: Unit 8:** 5.50, 5.51, 5.52,		

	change.	5.53, 5.54, 5.55, 5.56, 5.57		
c.	Solve equations for a specified variable.	**Chapter 5: Unit 8:** 5.56, 5.57, 5.58, 5.59		
d.	Solve proportions that include algebraic first-degree expressions.	**Chapter 4: Unit 1:** 4.07 **Chapter 5: Unit 8:** 5.50, 5.51, 5.52, 5.53, 5.54, 5.55, 5.56, 5.57 **Chapter 13: Unit 4:** 13.35		
Objective 3.3: Solve and interpret pairs of linear equations and inequalities.				
a.	Solve systems of two linear equations graphically and algebraically with and without technology.	**Chapter 7: Unit 1:** 7.00, 7.01, 7.02, 7.03, 7.04 **Chapter 7: Unit 2:** 7.05, 7.08, 7.09 **Chapter 7: Unit 3:** 7.10 **Chapter 7: Unit 4:** 7.11, 7.12, 7.13, 7.14, 7.15, 7.16, 7.17, 7.18, 7.20, 7.21 **Chapter 7: Unit 5:** 7.22, 7.23, 7.24, 7.25, 7.26, 7.27, 7.28, 7.29, 7.30, 7.31 **Chapter 7: Unit 6:** 7.32, 7.33, 7.34, 7.35, 7.36 **Chapter 7: Unit 7:** 7.37, 7.38, 7.39, 7.40, 7.41, 7.42, 7.43, 7.44, 7.45, 7.46		
b.	Determine the number of possible solutions for a system of two linear equations.	**Chapter 7: Unit 2:** 7.05, 7.06, 7.07, 7.08, 7.09 **Chapter 7: Unit 4:** 7.19		
c.	Graph a system of linear inequalities and identify the solution.	**Chapter 8: Unit 4:** 8.27, 8.28, 8.29, 8.30, 8.31, 8.32, 8.33, 8.34, 8.35		
Objective 3.4: Factor polynomials with common monomial factors and factor simple quadratic expressions.				
a.	Find the greatest common monomial factor of a polynomial.	**Chapter 10: Unit 7:** 10.51, 10.60 **Chapter 10: Unit 8:** 10.64 **Chapter 11: Unit 4:** 11.26		

b.	Factor trinomials with integer coefficients of the form $x^2 + bx + c$.	**Chapter 10: Unit 7:** 10.51, 10.52, 10.53, 10.54, 10.55, 10.56, 10.57, 10.58, 10.59, 10.60, 10.61, 10.62, 10.63 **Chapter 10: Unit 8:** 10.64, 10.65, 10.66, 10.67, 10.68, 10.69, 10.70 **Chapter 11: Unit 1:** 11.04 **Chapter 13: Unit 1:** 13.04		
c.	Factor the difference of two squares and perfect square trinomials.	**Chapter 10: Unit 9:** 10.71, 10.72, 10.73, 10.74		
Objective 3.5: Solve quadratic equations using factoring or by taking square roots.				
a.	Solve quadratic equations that can be simplified to the form $x^2 = a$ where $a \geq 0$ by taking square roots.	**Chapter 13: Unit 2:** 13.13, 13.14, 13.15, 13.16, 13.17, 13.18, 13.19, 13.20		
b.	Solve quadratic equations using factoring.	**Chapter 13: Unit 1:** 13.00, 13.01, 13.02, 13.03, 13.04, 13.05, 13.06, 13.07, 13.08, 13.09, 13.10, 13.11, 13.12 **Chapter 13: Unit 3:** 13.21, 13.22, 13.23, 13.24, 13.25, 13.26 **Chapter 13: Unit 4:** 13.27, 13.28, 13.29, 13.30, 13.31, 13.32, 13.33, 13.34, 13.35, 13.36, 13.37		
c.	Write a quadratic equation when given the solutions.	**Chapter 13: Unit 1:** 13.01, 13.02, 13.07 **Chapter 13: Unit 6:** 13.45, 13.46, 13.47, 13.48, 13.49, 13.50, 13.51, 13.52, 13.53, 13.54		
STANDARD IV: Students will understand concepts from statistics and apply statistical methods to solve problems.				
Percentage of coverage in the *student and teacher edition* for Standard IV: 100 %		**Percentage of coverage not in student or teacher edition, but covered in the *ancillary material* for Standard IV: 0 %**		

OBJECTIVES & INDICATORS		Coverage in *Student Edition(SE) and Teacher Edition (TE)* (pg #'s, etc.)	Coverage in *Ancillary Material* (titles, pg #'s, etc.)	*Not covered in TE, SE or ancillaries* ✓
Objective 4.1: Objective 1: Summarize, display, and analyze bivariate data.				
a.	Collect, record, organize, and display a set of data with at least two variables.	**Chapter 4: Unit 1:** 4.00, 4.01, 4.02, 4.03, 4.04, 4.05, 4.06, 4.07, 4.08, 4.09, 4.10, 4.11 **Chapter 4: Unit 2:** 4.12, 4.13, 4.14, 4.15 **Chapter 4: Unit 3:** 4.16, 4.17, 4.18, 4.19, 4.20, 4.21 **Chapter 4: Unit 4:** 4.22, 4.23 **Chapter 4: Unit 5:** 4.24 **Chapter 5: Unit 9:** 5.58, 5.59, 5.60, 5.61		
b.	Determine whether the relationship between two variables is approximately linear or non-linear by examination of a scatter plot.	**Chapter 5: Unit 9:** 5.58, 5.59, 5.60, 5.61, 5.62, 5.64		
c.	Characterize the relationship between two linear related variables as having positive, negative, or approximately zero correlation.	**Chapter 5: Unit 9:** 5.62, 5.64		
Objective 4.2: Estimate, interpret, and use lines fit to bivariate data.				
a.	Estimate the equation of a line of best fit to make and test conjectures.	**Chapter 5: Unit 5:** 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 **Chapter 5: Unit 9:** 5.62, 5.63, 5.64		
b.	Interpret the slope and *y*-intercept of a line through data.	**Chapter 5: Unit 4:** 5.23, 5.24, 5.25, 5.26 **Chapter 5: Unit 5:** 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 **Chapter 5: Unit 9:** 5.62, 5.63, 5.64		

c.	Predict *y*-values for given *x*-values when appropriate using a line fitted to bivariate numerical data.	**Chapter 5: Unit 9:** 5.62, 5.63, 5.64		